Profitable Corn Production in Michigan

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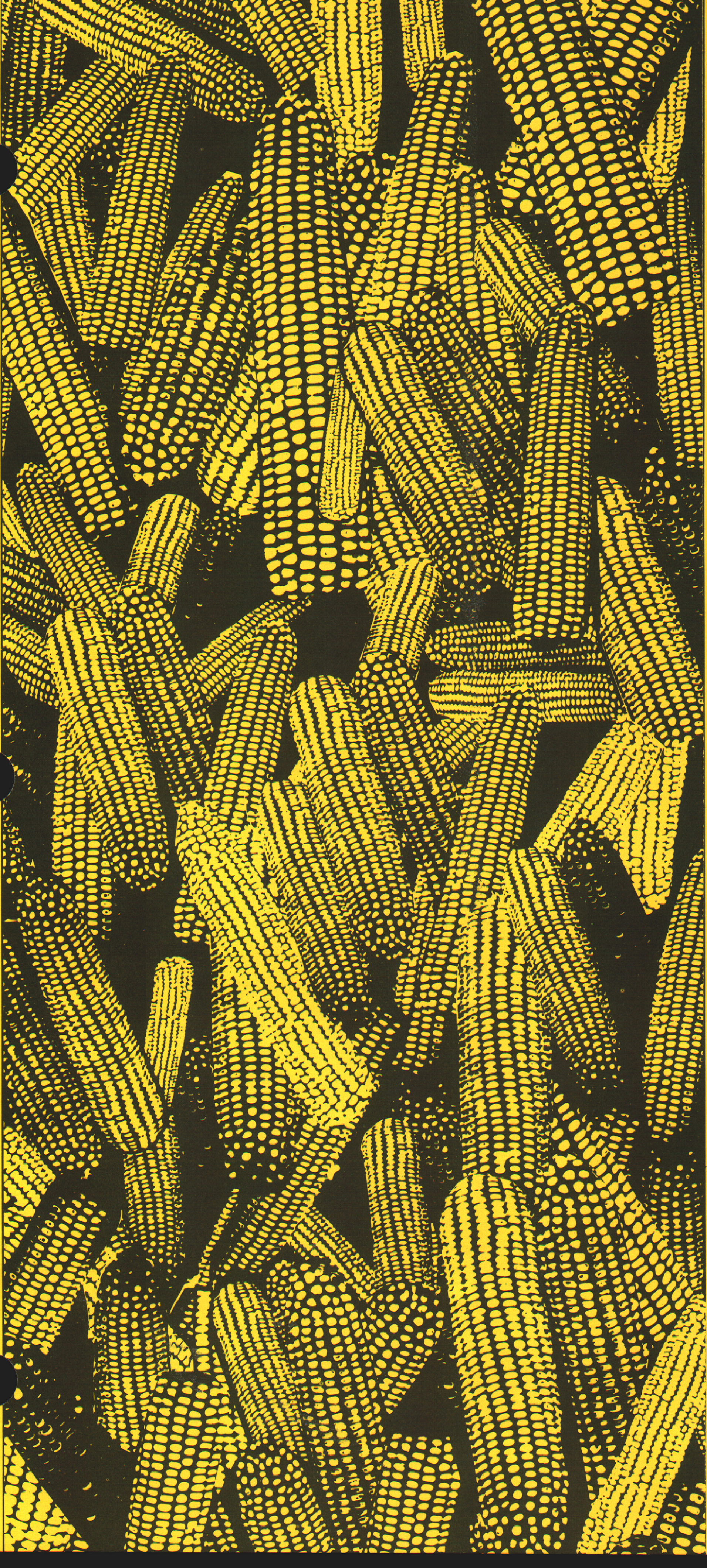

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MICHIGAN STATE UNIVERSITY
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COOPERATIVE EXTENSION SERVICE

14 Steps to Profitable Corn Production in Michigan

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Corn is Michigan's number one crop, both in acreage and dollar value. For the 5-year period 1975-79, Michigan farmers harvested an average of 2,708,000 acres of corn a year — 2,308,000 acres as grain and 400,000 acres as silage. The grain had an average annual value of more than $403 million.

Corn acreage and yield per acre have both increased substantially in Michigan over the past 15 years. Total production of corn grain more than doubled from the 5-year period 1965-69 to the 1975-79 period (see Table 1).

Although field corn is grown in all sections of Michigan, production is concentrated south of the Bay City-Muskegon line. The northern half of the Lower Peninsula produces corn for grain; corn for silage is grown in the Upper Peninsula. The major corn-producing counties in Michigan are listed in Table 2.

1. Adaptation

Corn may be grown on a wide range of soils, from sands to clays to muck. However, without irrigation highest yields are obtained on the finer-textured soils, such as clay loams and silt loams. Lack of moisture is a major factor limiting corn yields in Michigan. Michigan has the lowest rainfall during the growing season of any state east of the Mississippi River. This has resulted in a substantial increase in acreage of irrigated corn in Michigan in the last 10 years, primarily in southwestern Michigan. Sands, loamy sands, and sandy loams are especially responsive to irrigation in terms of increased yields. Under good management on these coarse-textured soils, yield increases with irrigation may range from 2 to 3 times those obtained without irrigation.

There is a wide range in the length of the growing season in Michigan, the frost-free period ranging from 60 days in some sections of the western U.P. to 170 days in extreme southeastern and southwestern Michigan. Growers should select hybrids that will mature in the area grown. Information on the relative maturity of various hybrids, based on moisture content at harvest, is available in "Hybrids Compared", Extension Bulletin E-431.*

2. Continuous vs Rotation

Rotation corn is likely to outyield continuous corn by a slight margin if the best-known management practices are used. This is the conclusion of several research projects in Michigan and elsewhere.

Interestingly, the current world corn record of 352.6 bushels per acre, held by a St. Joseph County, Michigan, farmer, was produced with corn after corn. In contrast, a previous world record of 306.6 bushels per acre in Monroe County, Michigan, was with corn after wheat.

An adequate supply of plant nutrients, especially nitrogen, is essential for high yields. The use of high rates of the more common nitrogen fertilizers over an extended period tends to increase soil acidity. Corn grow-

* Available at County Extension offices.

Table 2. The Top Corn Producing Counties in Michigan — 1979.

County	*Rank*	*Total acres*	*Grain production*
			(1,000 bu.)
Lenawee	1	113,700	11,827
Huron	2	138,000	11,226
Branch	3	110,000	10,371
Tuscola	4	108,000	10,075
Sanilac	5	126,000	9,435
Hillsdale	6	103,000	9,293
Ingham	7	108,000	8,981
Allegan	8	105,000	8,330
St. Joseph	9	88,000	8,297
Monroe	10	79,200	8,065

Table 1. Average Annual Corn Production in Michigan — Comparing Five-Year Periods.

	Acres			*Grain*		
Year	*Grain*	*Silage*	*Total*	*Yield per acre*	*Production*	*Value*
	(1,000)	(1,000)	(1,000)	Bu.	(1,000 bu.)	($1,000)
1965-69	1,365	359	1,724	69	93,193	102,519
1970-74	1,676	391	2,067	75	124,393	222,713
1975-79	2,308	400	2,708	82	190,034	403,508

ers should be alert to this potential problem. For details on nitrogen fertilizer recommendations, refer to MSU Extension Bulletin E-802, "Effect of Nitrogen Fertilizer on Corn Yield".

Rootworm problems increase dramatically when corn is grown continuously and unless controlled will cause yield and lodging problems. For details on corn rootworm control, refer to MSU Extension Bulletin E-736, "Corn Rootworm".

Ideally, continuous corn production should be restricted to the more level fields on a farm because soil erosion can be a significant problem. Conservation tillage methods are strongly recommended where both continuous and rotation corn is produced on sloping land.

A well-defined cropping system — one that is adhered to consistently — offers several advantages over a haphazard system:

1. Such a system provides for a regular program of inventorying soil fertility levels with soil tests.
2. It helps to furnish a regular program for weed control whether by cultivation or chemicals.
3. It helps to make possible the efficient use of farm implements and power. Many farms have ample opportunity to reduce capital energy inputs for crop production. Haphazard systems are likely to be wasteful in some years and inadequate in others.
4. It permits a better soil conservation program by systematically including sod crops, cover crops and green manure crops as well as annual windbreaks in the system.
5. Where the rotation is well planned, the farmer who produces livestock is more likely to have a uniform feed production program.

3. Hybrid Selection

The major points to consider in hybrid selection are yield, relative maturity, and resistance to stalk lodging. Valid comparisons between hybrids can be made only by testing hybrids in the same field the same year.

Information on which to base hybrid selection may come from several sources:

— Michigan State University Hybrid Corn Trials (Extension Bulletin E-431)

— Local extension or dealer hybrid corn tests

— Tests on growers farm

Yield data from any type trial should involve harvest of **replicated** (more than one) plots of each hybrid, because of errors that can result from soil variability, plant population, and other environmental factors.

In selecting hybrids, consider maturity first and then consider yield and lodging resistance. Selection of early maturing hybrids has always been important in Michigan because of the relatively short growing season and the danger of frost before corn is mature; but now it is more important than ever with the high cost of energy for drying corn. Early maturing hybrids offer these advantages:

1. Reduced possibility of killing frost before corn matures.
2. Earlier harvest when weather conditions are most favorable.
3. Lower moisture content at harvest resulting in reduced drying costs or reduced market discounts for moisture.

Corn is mature (no more dry matter translocated to the kernel) when kernel moisture is down to 32 to 35%. One percent more moisture at harvest means a delay in maturity of about two days. Relative maturity of hybrids listed in Extension Bulletin E-431, "Hybrids Compared", is based on moisture content of the grain at harvest.

The "black layer" is an indicator of maturity in corn. This dark layer of cells near the tip of mature kernels may be observed by cutting the kernel lengthwise. The black layer indicates that dry matter is no longer being translocated into the kernel. Kernels at the tip of the ear are the first to have the black layer, and the large kernels at the butt of the ear are the last to get this dark layer of cells. An ear may be considered mature when at least 75 percent of the kernels in the central portion of the ear have black layers.

Other maturity considerations in hybrid selection are:

1. Choose the earliest hybrids for late plantings, non-irrigated sandy soils, and organic soils.
2. Choose several hybrids which differ slightly in maturity. If one hybrid encounters unfavorable weather at a critical stage of growth, the other hybrids may be less affected. Growing hybrids of different maturities also spreads the harvest load over a longer period.

Hybrids vary a great deal in resistance to stalk lodging. Select hybrids with good standability (lodging resistance) because hybrids that do not stand well result in increased yield losses at harvest. Stalk rot is a major cause of stalk lodging, but plant population, insect damage, and soil fertility also affect lodging.

Hybrids selected for silage should produce high yields of grain. Silage with a high percentage of grain has the highest feeding value. High dry-weight production per acre or high grain yields, rather than tons of green weight, should be used as a basis for selecting hybrids for silage.

Corn for silage should reach the early dent stage (most of the kernels dented) well before frost in an average year. Silage harvest should begin when the kernels are in the early dent to late dent stage.

For both grain and silage, try newly introduced hybrids which are shown by tests to be promising in your region.

Conservation Tillage for Corn is Gaining in Michigan.

4. Tillage

Tillage may be necessary for a number of reasons. The most frequent reasons for tillage include 1) to loosen a compact soil, 2) to destroy weeds, 3) to incorporate fertilizer, lime, manure or pesticides, and 4) to reduce soil erosion. If a reason is not obvious, tillage probably is not necessary.

Deep tillage may be practical where compact soil is located below normal plow depths. Yield differences between moldboard and chisel plow treatments are usually so small as to be insignificant. Refer to Extension Bulletin E-1041, "Tillage Systems for Michigan Soils and Crops", for more information on deep tillage.

The moldboard plow is best suited to the more level fields, especially those that contain fine-textured soil. The major problem with moldboard plowing is that it completely exposes the soil to the weather until a good crop cover is established. Soil moisture losses after secondary tillage may be excessive.

The chisel plow is increasing in popularity in several parts of the state. This implement is superior to the moldboard plow on sandy soil or where there is a slope, because it leaves some crop residue on the surface of the soil. This aids in reducing wind and water erosion. It also reduces water evaporation losses early in the season. The chisel plow is the only primary tillage implement that should be used where there is a significant slope to the field. As with the moldboard plow, the chisel plow should penetrate only as deep as needed to achieve the desired purpose of the tillage.

Secondary tillage is the process of seedbed preparation after a field has been plowed. The desirability of secondary tillage is dependent upon soil characteristics after plowing. If there are no weeds, large clods or crusts, and if the surface of the field is relatively smooth, there is little justification for secondary tillage. In fact, under such circumstances, secondary tillage may be harmful especially when a very fine seedbed is produced and where heavy tractors pulling tillage tools pack the soil excessively.

The no-till method of corn production is increasing in use in Michigan. This minimum tillage method involves special planters and herbicides. With this method a narrow slot is made in untilled soil so that seed can be placed where soil moisture levels are adequate for rapid germination. Weeds are controlled with herbicides. For details on no-till production methods refer to Extension Bulletin E-904, "No-Till Corn I, Guidelines"; Extension Bulletin E-905, "No-Till Corn II, Fertilizer and Liming Practices"; Extension Bulletin E-906, "No-Till Corn III, Soils"; and Extension Bulletin E-907, "No-Till Corn IV, Weed Control." Extension Bulletin E-791, "Problem Perennial Weeds," is an excellent supplement publication to this series on no-till corn production.

5. Lime and Fertilizer

High corn yields can be produced over a relatively wide range of soil pH conditions. With no-till corn, the pH of the surface two inches of soil is likely to be much more acid than at greater depths. Therefore, a separate sample from the surface two inches is advised. Herbicide activity is usually greatly improved where lime is used to maintain a minimal pH of 6.0. Disregarding interactions involving herbicides, the pH should not be allowed to drop below 5.5.

The nutrient requirements for corn are as high or higher than for any other field crop grown in Michigan. A 200 bushel/ acre crop contains approximately 265 pounds of nitrogen (N), 120 pounds of phosphate (P_2O_5), 230 pounds of potash (K_2O), 42 pounds of calcium (Ca), 34 pounds of magnesium (Mg) and 26 pounds of sulfur (S). When the soil does not supply adequate amounts, the nutrients must be supplied from other sources, usually commercial fertilizer or livestock manures.

Soil sampling and testing is the easiest and best method for determining what kind and how much fertilizer should be used. Extension Bulletin E-498, "Sampling Soils for Fertilizer and Lime Recommendations", describes how to collect soil samples for testing. In general, samples should not be collected on a field basis but on a basis of kinds of soils within the field and to plow depth. Also a composite sample composed of a minimum of 20 subsamples and representing no more than 20 acres should be collected unless the soil is exceptionally uniform.

Fertilizer recommendations ($N + P_2O_5 + K_2O$) for corn are made by a soil-test laboratory taking into consideration not only the soil test levels but also your yield goal and the kind of soil tested. If you do not tell the laboratory the soil type represented by the sample the laboratory will estimate the texture of the sample.

Nitrogen tests are not made by most laboratories because soil test levels vary greatly from day to day. The MSU laboratory makes nitrogen recommendations for corn on the basis of yield goal, crop sequence, and the amount of livestock manure used. Growing corn continuously on sandy soil may require higher rates of nitrogen. On the average, 200 pounds of nitrogen is ample for 175 bushels of corn. It is used most effectively as a preplanting or side dressing treatment.

While many farmers successfully produce high yields with broadcast phosphate fertilizer, banding at planting time is generally recommended. Potassium is usually effective as a broadcast plowed-down fertilizer. This essential major nutrient should not be fall-applied on organic soils.

Magnesium (Mg) is recommended where soil test levels for this secondary element are low. This is likely to occur on the more acid sandy soils. No deficiencies of other secondary nutrients (calcium and sulfur) have ever been identified with corn grown in Michigan.

Of the micronutrients, only zinc and possibly manganese have been shown to be deficient. Where soil pH levels are relatively high and special soil tests for zinc and manganese indicate low levels of availability of these two micronutrients, they are recommended as part of the planting time fertilizer. They are also effective as foliar sprays.

6. Drainage

Excess soil water is normally a temporary problem in every Michigan corn field during some time of the year. Plants need oxygen as well as water in the root zone. Excess soil water displaces air, thus causing oxygen deficiencies.

Installing tile drains in the subsoil helps to remove excess water (gravitational, or free) from the root zone. (The terms subsurface or (soil) profile drains describe these systems.) Such drains transfer excess water through the tile main to a location where it can be disposed of or will do no damage or can be stored for later use.

In contrast, surface drainage is the systematic removal of excess water from the surface of land. This is done by improving natural drainage ways, constructing surface drains, and remodeling or shaping the land surface. Surface drainage frequently is most effective when used in conjunction with tile drains.

Little information is available in Michigan on how many acres might respond to improved drainage. At least one half of that land already tile-drained and much of the 1.5 million acres of poorly drained land still needing tile undoubtedly would benefit from surface drains.

For more details on drainage refer to Extension Bulletin E-909 entitled "Tile Drainage for Improved Crop Production" and to E-1295 entitled "Surface Drainage for Improved Crop Production".

7. Irrigation

The primary purpose of irrigation is to increase corn yields while reducing risk. The potential to increase yields in Michigan is great on sandy soils. The best system is designed specifically for **your** field and labor requirements, and your success with your best system is dependent on superior soil and crop management practices.

The extent to which yield increases can be obtained is reported in Table 3. These data are tentative but fit the results of the irrigators with whom we have worked. For more information on irrigation, refer to Extension Bulletin E-857, "High Corn Yields with Irrigation", and to E-1110, "Irrigation Scheduling for Field Crops and Vegetables".

Table 3. Corn Grain Yield Increases Due to Irrigation and Associated Improved Management in Southern Michigan.

Dominant profile texture		*Natural drainage*		
		Well drained	*Somewhat poorly drained*	*Poorly drained*
	Key	Bu/A		
Clay	1.0	35	20	10
Clay loam	1.5	35	25	15
Loam	2.5	60	50	40
Sandy loam	3.0	85	75	70
Loamy sand	4.0	105	100	90
Sand	5.0	130	120	100

8. Planting Date

Date-of-planting trials at Michigan State University for more than 30 years (1948-1980) have consistently shown a yield advantage for corn (grain or silage) planted in late April or early May (April 20-May 5) over that planted later in May or early June. Data are not as consistent when comparing late April with early May plantings. In some years late April plantings outyielded early May plantings; in other years the reverse was true. However, anyone with a substantial acreage of corn should start planting in late April — if soil conditions are suitable. There is a large yield advantage for corn planted in late April over that planted in late May.

A rule-of-thumb is that where corn planted in early May yields approximately 100 bushels per acre, corn yields decrease about one bushel per acre per day with delayed planting.

An additional advantage of early planted corn is that it matures earlier in the fall. As with selecting early maturing hybrids, earlier maturity reduces drying costs or market discounts for moisture.

Test data show that early planting is advantageous for both early- and late-maturing hybrids. Weather records show that the first week of May is likely to be drier than the second week of May, and therefore more favorable for corn planting.

Data from a 5-year period of the Michigan State University trials at East Lansing are given in Table 4.

In this 5-year period, yields were greater from the average planting date of April 21 than from the average planting date of May 3.

Soil temperature should be ignored when planting corn, as it was in the 5-year period reported in Table 4 and in all 33 years of the date-of-planting trials at Michigan State University. Plant corn by calendar rather than by soil temperature.

When planting corn in April or early May, pay attention to the following:

— Use seed of excellent quality (*Cold test germination* should be 70 percent or better.)

— Use a seed population 15 to 20 percent higher than the desired harvest plant population.

— Pay special attention to weed control. Use preplant or preemergence herbicides. Weather conditions early in the season tend to favor early weed growth more than corn growth.

On organic soils, delay planting about 2 weeks from the dates indicated previously. In the northern Lower Peninsula, delay planting about 1 week; in the Upper Peninsula the delay should be 10 to 14 days.

Spring frosts may kill the above-ground seedling leaves of early-planted corn in some seasons. Since the growing point of the corn plant remains below ground until the plants are about 10 inches tall, the plants are not killed unless the soil temperature goes below 32°F. But soil temperatures lag behind air temperatures. Plants with frosted leaves will usually produce new leaves in a few days, and the crop will outyield later plantings or replants. Corn plants are much more likely to be killed on organic (muck) soils which are dry and loose, as the soil temperature follows the air temperature more closely under such conditions. Frost damage will be less if the soil is left undisturbed than if cultivated.

Early planting is also recommended for corn to be harvested for silage. In Table 5 the total silage yield is greater with early planting and the grain/stover ratio is higher. Early-planted corn results in slightly shorter plants than with later planting.

Table 5. Corn Silage Yields as Related to Date of Planting. Pounds per acre (dry weight)

Planting date	*Grain*	*Stalk*	*Total*	*Grain (%) in silage*
May 9	7,600	6,600	14,200	54
May 22	6,200	7,000	13,200	47
June 3	5,500	7,400	12,900	43

9. Plant Population

Plant population has a significant effect on the yield of corn. Although the optimum population will vary with yield level, test results show 18,000 to 20,000 plants per acre at harvest to be an optimum population over a rather wide yield range.

Plant population trials have been conducted at overstate hybrid trial locations for many years. The data in Table 6 are based on 5 hybrids tested at 4 plant populations at 14 non-irrigated locations in Michigan. Highest yields were obtained with the 19,200 plant population at all locations.

Plant population requirements are higher for the high yields obtained with irrigation. Test results over a 5-year period, involving 5 hybrids and 4 plant populations, with and without irrigation, are given in Table 7. These tests were conducted on a Montcalm sandy loam at the Montcalm Branch Experiment Station. With irrigation, the highest yields were obtained at the 23,300 population; without irrigation at the 19,200 population.

Stalk lodging increases as populations are increased. Data on the relationship of stalk lodging to plant population are given in Table 8. The data support a harvest population of 18,000 to 20,000 plants per acre for yields of 90 to 150 bushels per acre. For yields of 150

Table 4. Date-of-Planting Trials at MSU (5-year average).

Average date planting	*Days to emergence*	*% stand*	*Days to 50% silked*	*% Moisture at harvest*	*Bushels/Acre at 15.5% M*
April 21	9 to 21	83	78	26	102
May 3	8 to 10	90	74	28	96
May 13	6 to 16	91	71	31	83
May 23	6 to 10	91	69	34	78
June 2	5 to 8	93	66	39	64
June 11	6 to 7	92	63	43	72

to 200 bushels per acre, harvest populations of 23,000 to 25,000 plants per acre are suggested. Occasionally it might be profitable to increase these populations by 2,000 to 3,000 plants per acre based on experience with specific hybrids and specific soils.

The seed population should be 15 to 20 percent higher than the desired harvest population when corn is planted in late April or early May. When corn is planted in mid or late May, 10 percent extra seed is generally adequate.

Table 6. Average Grain Yields as Related to Population (Bushels per acre at 15.5% Moisture) for 3-Year Period, 1977-1979. Not irrigated.

County	Plant population at harvest				Soil Texture
	15,400	19,200	23,300	27,500	
Monroe	122	134	129	120	Loam
Hillsdale	117	132	127	121	Clay loam (1978-79) Sandy loam (1977)
Branch	144	162	160	150	Sandy loam
Kalamazoo	116	132	124	117	Sandy loam
Cass	114	129	120	112	Muck
Kent	126	143	140	130	Loam
Ottawa	128	142	138	130	Sandy loam
Ingham	132	149	144	137	Clay loam
Sanilac	127	142	134	128	Clay loam
Saginaw	124	139	136	128	Clay loam
Huron	128	142	137	130	Clay loam
Montcalm	81	93	85	81	Sandy loam
Mason-Oceana	110	124	119	114	Sandy loam
Grand Traverse	87	96	91	83	Loam
Averages	118	133	127	120	

Table 7. Grain Yields (Bushels per acre at 15.5% Moisture) at 4 Plant Populations; Irrigated and Not Irrigated. Montcalm Experiment Station, 1975-1979.

Population:	15,300		19,200		23,300		27,500	
Year	Irrig.	Not Irrig.	Irrig.	Not Irrig.	Irrig.	Not Irrig.	Irrig.	Not Irrig.
1975	158	136	183	164	196	151	172	146
1976	153	72	174	84	181	81	161	68
1977	141	74	152	81	160	70	150	69
1978	146	92	164	110	175	100	165	94
1979	123	77	140	87	138	83	131	78
Averages	144	90	163	105	170	97	156	91

Table 8. Average Percent Stalk Lodging at 4 Plant Populations, 1977-79. 17 Locations.

Year	Population: 15,400	19,200	23,300	27,500
1977	1.4	2.6	5.7	8.4
1978	1.0	2.4	4.0	6.4
1979	1.7	4.2	8.7	13.0
Averages	1.4	3.0	6.1	9.3

10. Row Width

Row width is another production practice which affects corn yields. Higher yields are obtained with 28 to 30 and 18 to 20-inch rows than with 36-inch and wider rows.

A 3-year test at East Lansing on a Conover loam soil with 33 hybrids at a population of 19,500 plants per acre resulted in average yields for all hybrids of 125 bushels per acre at the 18-inch and 30-inch row widths compared to 115 bushels per acre at the 36-inch row width. Data from this test are given in Table 9.

Table 9. Effect of Row Width on Grain Yields, 33 Hybrids — 3-Year Average, East Lansing.

Hybrid yields	18-inch rows	30-inch rows	36-inch rows
	Bushels per acre at 15.5% moisture		
Lowest	102	86	87
Highest	148	154	134
Average of all hybrids	125	125	115

Thirty-inch rows are more practical than those of 18-20 inches because of machinery and equipment problems with the narrower rows. An increasing percentage of the Michigan corn crop is planted in the 28- to 32-inch row widths.

11. Planting Depth

Shallow planting, ¾ to 1½ inches, is recommended for early planting in cool soils. For later planting when the soil surface is more likely to become dry, plant 1½ to 2½ inches deep. Plant at the shallower ranges on fine textured (clay) soils and the deeper ranges on coarse textured (sandy) soils.

12. Weed Control

Effective weed control in modern day corn production involves the use of herbicides , but cultivation may supplement the herbicides. Cultivation should be shallow so as not to prune the roots of the corn plants.

Early weed control is essential to eliminate competition for moisture, sunlight, and nutrients. Preplant and preemergence herbicide applications generally give more effective weed control than postemergence applications, but postemergence applications are sometimes necessary.

More consistent and broader spectrum weed control may be attained by combining 2 or 3 herbicides in one application or in separate applications. Combinations may also have the advantage of reducing herbicide residues (carryover). For specific herbicide recommendations, see Extension Bulletin E-434, "Weed Control Guide for Field Crops".

Weed Control is Essential to High Yields.

Harvest — the Measure of Success.

13. Insect and Disease Control

Corn rootworm is a major insect problem where continuous corn is grown. The most effective control is to rotate corn with another crop. But where corn is grown continuously, a number of soil insecticides are available for control of rootworm. For more detailed information on corn rootworm control, see Extension Bulletin E-736, "Corn Rootworm". For control of other corn insects, including seed corn maggot, corn borer, and aphids, see Extension Bulletin E-828, "Control of Field Corn Insects".

Fungi which cause stalk rot are the primary cause of stalk lodging. Stalk rot infection and disease development are favored by warm humid weather with abundant rainfall during the latter part of the growing season. Hybrids vary in resistance to stalk rot fungi, but no specific hybrid resists all strains.

The corn leaf blights and other corn diseases, are controlled primarily by resistant hybrids. For information on leaf blights, see Extension Bulletin E-832, "Corn Leaf Blights".

14. Harvest

Methods of harvesting corn grain include the combine with corn head (most common), mechanical pickers for ear corn, and field picker-shellers. Storage may be in bins, cribs, or as high moisture corn in a silo.

Best time to harvest varies with the harvest and storage system. Early harvest gives the least field loss. Field losses are minimal when corn is harvested for storage as high moisture corn in a silo. Ideal moisture for ground ear corn is 30 to 35 percent (kernel moisture of 25 to 30 percent). For high moisture shelled corn stored in a silo the ideal moisture is 25 to 30 percent.

The preferred moisture range for harvesting shelled corn to be stored as dry grain is 21 to 28 percent. Harvesting at 25 to 28 percent moisture results in reduced harvest losses, reduced kernel damage, and lessens the possibility of moldy corn compared to harvesting at lower moisture levels. But the disadvantage of harvesting at the higher moisture level is that it requires more energy for drying.

The preferred kernel moisture level for corn harvested to be stored as ear corn in a crib is 20 to 25 percent.

MSU Extension Corn Publications

Hybrids Compared, E-431 (40 cents)

Corn Silage, E-1139 (50 cents)

Effect of Nitrogen Fertilizer on Corn Yield, E-802 (Free)

High Corn Yields with Irrigation, E-857 (50 cents)

Fertilizer Recommendations for Field and Vegetable Crops, E-550 (65 cents)

Weed Control Guide Field Crops, E-434 (40 cents)

No-Till Corn:

1. Guidelines, E-904 (Free)
2. Fertilizer and Liming Practices, E-905 (Free)
3. Soils, E-906 (Free)
4. Weed Control, E-907 (Free)

Corn Rootworm, E-736 (Free)

Control of Field Corn Insects E-828 (Free)

Corn Leaf Blights E-832 (Free)

Drying and Storing Shelled Corn E-799 (Free)

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